

REMARKS

At the outset, the Applicant thanks the Examiner for the thorough review and consideration of the pending application. The Office Action dated June 26, 2007 has been received and its contents carefully reviewed.

A Substitute Specification in compliance with 37 C.F.R. § 1.125 is attached hereto. The Substitute Specification includes no new matter. The amendments to the specification are described above.

Claims 1, and 5-7 are hereby amended and claims 9 and 10 are hereby newly added. Claims 2 and 4 are hereby canceled without prejudice or disclaimer. No new matter has been added. Accordingly, claims 1-10 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

The Office Action rejected claims 1-8 under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Claims 2 and 4 have been canceled, therefore the rejection of these claims is considered moot. The Applicant respectfully traverse the rejection of the remaining claims.

The Office Action states that the term “master patch” is indefinite. *See page 2, paragraph 3 of the Office Action.* As stated above, the Applicant has amended the specification and claims to replace the term “master patch” with “master batch.” The Applicant contends that this amendment corrects an inadvertent typographical error. No new matter has been added. Accordingly, the Applicant respectfully requests that the 35 U.S.C. § 112, second paragraph rejection of claims 1-8 be withdrawn.

Further, the Office Action alleges that “the recitation of “inorganic compound” and “silver compound” is indefinite.” *See page 2, paragraph 4 of the Office.* The Applicant respectfully disagrees.

In an attempt to support the rejection, the Examiner alleges that “given the number and chemically distinct compounds falling within the scope of this genius, it is impossible for

one of ordinary skill to ascertain the metes and bounds of the claim.” See page 2, paragraph 4 of the Office Action. In other words, it appears that the Examiner considers that one of ordinary skill would not be able to ascertain the metes and bounds of the claims because “inorganic compound” and “silver compound” are broad recitations. The breadth of a claim cannot to be equated with indefiniteness. See M.P.E.P. § 2173.04. One of ordinary skill in the art would understand the metes and bounds of these terms. Moreover, the specification provides adequate support for these terms. Therefore, claims 1-8 particularly point out and distinctly claim the subject matter that the Applicant regards as his invention. Accordingly, the Applicant respectfully requests that the 35 U.S.C. § 112, second paragraph rejection of claims 1-8 be withdrawn.

Moreover, the Office Action states that the terminology “isothiazolin-3-non” is not an art recognized term. See page 2, paragraph 5 of the Office Action. As stated above, the Applicant has amended the specification and claims to replace the term “isothiazolin-3-non” with “isothiazolin-3-one.” The Applicant contends that this amendment corrects an inadvertent typographical error. No new matter has been added. Accordingly, the Applicant respectfully requests that the 35 U.S.C. § 112, second paragraph rejection of claims 1-8 be withdrawn.

The Office Action rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No. 08-092019 (hereinafter “the ‘019 patent”) alone or in view of Japanese Patent No. 05-025319 (hereinafter “the ‘319 patent”) and the English Abstract of Korean Patent No. 10-1997-70004205 (hereinafter “the ‘205 abstract”). Claims 2 and 4 have been canceled, therefore the rejection of these claims is considered moot. The Applicant respectfully traverse the rejection of the remaining claims.

As required in Chapter 2143.03 of the M.P.E.P., in order to “establish *prima facie* obviousness of the claimed invention, all the limitations must be taught or suggested by the prior art.” The Applicant submits that the ‘019 patent, the ‘319 patent and the ‘205 abstract fail to teach or suggest each and every element recited in claims 1 and 3. In particular, claim 1 has been amended to recite an anti-microbial composition which includes, among other features, “0.3-1.0% of an anti-microbial master batch, the anti-microbial master batch having 89% of polypropylene, 5% of isothiazolin compound, 5% of inorganic compound, and 1% of silver

compound, wherein the inorganic compound is different from the silver compound and the isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one of chemical formula 2 at a ratio of 4:1.” None of the references, either singularly or in combination, teach or suggest at least these features.

With regard to the rejection of claims 1 and 3 under 35 U.S.C. § 103(a) over *the ‘019 patent* alone, the Office Action alleges that “the ‘019 abstract is generic to each of the isothiazolin compounds.” Further, the Office Action alleges that “the difference between this abstract and the claimed invention is that one must select the claimed species from the disclosed genus. The knowledge generally available and suggestion in the abstract provides sufficient motivation to select the claimed species from those identified in the abstract.” *See page 3 of the Office Action.* The Applicant respectfully disagrees.

The *‘019 patent* teaches is an antimicrobial resin comprising a synthetic resin, a thiazoline bactericidal agent and metal content. *See lines 1-8 of the Abstract.* The *‘019 patent* further suggests that the thiazoline compound may be chosen from “1,2-bends iso thiazoline-3-ON, and 5-chloro-2-methyl-4-iso thiazoline-3-ON and 2-methyl-4-iso thiazoline-3-ON and 2-n-octyl-4-iso thiazoline-3-ON, etc.” *See paragraph [0007] of the English translation of the ‘019 patent.* However, *the ‘019 patent* fails to teach or suggest that the thiazoline compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one. Moreover, *the ‘019 patent* fails to teach or suggest selecting more than one compound. Therefore, *the ‘019 patent* cannot possibly teach or suggest an “anti-microbial master batch having 89% of polypropylene, 5% of isothiazolin compound, 5% of inorganic compound, and 1% of silver compound, wherein the inorganic compound is different from the silver compound and the isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one,” as recited in claim 1.

Nevertheless, even if, assuming *arguendo*, one of ordinary skill would have been motivated to “select[] the claimed species from the disclosed genus,” as suggested, *the ‘019 patent* still fails to teach or suggest each and every feature of the claimed invention. Specifically, *the ‘019 patent* fails to teach or suggest that “the isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one of

chemical formula 2 at a ratio of 4:1.” Moreover, it would not have been obvious to one of ordinary skill in the art to combine the aforementioned compounds at a ratio of 4:1. Since *the ‘019 patent* fails to teach or suggest each and every feature of the claimed invention, *the ‘019 patent* does not render the claimed invention obvious.

For at least the aforementioned reasons, the Applicant respectfully submits that claim 1 is patentably distinguishable over *the ‘019 patent*. Likewise, claim 3, which depends from claim 1 is also patentable for at least the same reasons. Accordingly, the Applicant respectfully requests that the 35 U.S.C. §103(a) rejection of claims 1 and 3 over *the ‘019 patent* be withdrawn.

With regard to the rejection of claims 1 and 3 under 35 U.S.C. § 103(a) over *the ‘019 patent* in view of *the ‘319 patent* and *the ‘205 abstract*, as stated above *the ‘019 patent* fails to teach each and every feature recited in claim 1. The Office Action relies on *the ‘319 patent* to teach “an antimicrobial agent in plastics with zinc oxide” and *the ‘205 abstract* to teach “an antimicrobial agent in plastics with a metal compound.” See page 3, paragraphs 9 and 10 of the *Office Action*. However, neither of these references overcome the previously noted shortcomings of *the ‘019 patent*, namely an “anti-microbial master batch having 89% of polypropylene, 5% of isothiazolin compound, 5% of inorganic compound, and 1% of silver compound, wherein... isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one of chemical formula 2 at a ratio of 4:1.” Therefore, even if, assuming *arguendo*, one skilled in the art would have contemplated modifying *the ‘019 patent* in view of *the ‘319 patent* and *the ‘205 abstract*, as suggested, the modification would still fail to teach or suggest each and every feature recited in independent claim 1. Because none of the references teach or suggest each and every feature of the claims, the teaching of *the ‘019 patent* in view of *the ‘319 patent* and *the ‘205 abstract* cannot be considered to render the invention obvious.

For at least the aforementioned reasons, claim 1 is patentably distinguishable over *the ‘019 patent* in view of *the ‘319 patent* and *the ‘205 abstract*. Likewise, claim 3, which depends from claim 1 is also patentable for at least the same reasons. Accordingly, the Applicant

respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 1 and 3 over *the '019 patent* in view of *the '319 patent* and *the '205 abstract* be withdrawn.

The Office Action rejected claims 5-8 under 35 U.S.C. § 103(a) as being unpatentable over *the '019 patent* taken alone or in view of *the '319 patent* and *the '205 abstract*", alone or in further view of U.S. Patent No. 6,437,020 to *Amick et al.* (hereinafter "*Amick*"). The Applicant respectfully disagrees.

As previously discussed, the teachings of *the '019 patent* alone or in view of *the '319 patent* and *the '205 abstract* fail to teach or suggest each and every feature recited in claim 1, the independent claim from which claims 5-8 depend. Moreover, *Amick* is relied upon to teach "antimicrobial molded articles." See page 4, paragraph 12 of the Office Action. However, *Amick* fails to overcome the above mentioned shortcomings, namely an "anti-microbial master batch having 89% of polypropylene, 5% of isothiazolin compound, 5% of inorganic compound, and 1% of silver compound, wherein the inorganic compound is different from the silver compound and the isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one of chemical formula 2 at a ratio of 4:1." The Office Action alleges that "it is prima facie obvious to mold the resin compositions into any form that has previously been molded from similar resin compositions and that one would desire to have the antimicrobial properties imparted from the functional ingredients discussed in the abstracts." See page 3, line 22- page 4, line 3 of the Office Action. Even if, assuming *arguendo*, this were true and one of ordinary skill contemplated modifying *the '019 patent* alone or in view of *the '319 patent* and *the '205 abstract*, alone or in further view of *Amick*, as suggested, the modified teachings still fail to teach or suggest all of the features of independent claim 1. Since *the '019 patent*, *the '319 patent*, *the '205 abstract* and *Amick* fail to teach or suggest all of the features claimed in claim 1, the independent claim from which claims 5-8 depend, *the '019 patent*, *the '319 patent*, *the '205 abstract* and *Amick* cannot be considered to render the claimed invention obvious. Therefore, the Applicant submits that claims 5-8 are patentably distinguishable over the cited references and request that the 35 U.S.C. § 103(a) rejection be withdrawn.

With regard to the newly added claims 9 and 10, the Applicant submits that neither *the '019 patent, the '319 patent, the '205 abstract* nor *Amick* teach or suggest each and every feature of the claims, namely "0.3-1.0% of an anti-microbial master batch, the anti-microbial master batch having 90% of polypropylene and 5% of an isothiazolin compound and 5% of an inorganic compound, wherein the inorganic compound is different from a silver compound and the isothiazolin compound comprises 4,5-dichloro-2-N-octyl-4-isothiazolin-3-one of chemical formula 1 and 2-N-octyl-4-isothiazolin-3-one of chemical formula 2 at a ratio of 4:1." Therefore, claims 9 and 10 are patentably distinguishable over the cited references.

The application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

By Michael J. Long (Reg. No. 46,522)
for Mark R. Kresloff
Registration No.: 42,766
McKENNA LONG & ALDRIDGE LLP
1900 K Street, N.W.
Washington, DC 20006
(202) 496-7500
Attorneys for Applicant